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10/549,798	06/02/2006	Genadi Velev	L7725.05111	7982

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EXAMINER

AGHERA, SAMEER R

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2616

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/549,798	Applicant(s) VELEV ET AL.	
	Examiner Sameer Aghera	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>19 September 2005</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Specification

1. The following title is suggested: Method and communication system for **signaling** information for **optimization** rate control schemes in wireless networks.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-3, 5, and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Rhee (US 2002/0181494 A1).

Rhee discloses a method and system for rate-base control between a sender and a receiver comprising the following features.

Regarding **claim 1**, exchanging PDP context (see "TCP" and "packet," Abstract) between the receiver (see "sender" and Figure 1, item 100) and the network (see Figure 1, item 104), signaling PDP context (see "forwards the transmission rate to the sender," Abstract) to the receiver (see "sender" and Figure 1, item 100); and adapting the

sending rate using the signaled PDP context information (see “the sender sends packets to the receiver at the rate calculated,” Abstract).

Regarding **claim 2**, wherein the PDP context information comprises a variable service parameter (see “transmission rate,” Abstract), which is negotiable (see “forwards the transmission rate” and “sends the packets to the receiver at the rate calculated,” Abstract) between the control plane (see Figure 1, item 106) and the receiver (see Figure 1, item 100).

Regarding **claims 3 and 12**, wherein the negotiable parameter is the guaranteed bit rate for downlink (see “average rate” and “suitable for streaming applications,” Abstract).

Regarding **claim 5**, a sender (see “sender,” Abstract and Figure 1, item 100) that transmits data packets (see “packets,” Abstract) over the network (see Figure 1, item 104) employing the rate control scheme (see “TEAR,” page 1, paragraph 13) with a sending rate which can be adapted using feedback information from the receiver (see “send packets to the receiver at the rate calculated by the receiver,” Abstract); and a receiver (see “receiver,” Abstract and Figure 1, item 102) that exchanges the content of PDP context information from the network (see Figure 1, item 104) with a rate control scheme (see “TEAR,” page 1, paragraph 13) and signals the PDP context information to the sender (see “forwards the transmission rate to the sender,” Abstract), wherein the sender (see “sender,” Abstract and Figure 1, item 100) is adapted to adjust the sending rate using the signaled PDP context (see “send packets to the receiver at the rate calculated by the receiver,” Abstract).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rhee (US 2002/0181494 A1) in view of Li (7,099,954 B2).

Rhee discloses all elements as applied to paragraph 3 above including the following feature: regarding **claim 4**, wherein the rate control scheme is TCP-friendly (see "TCP-friendly," page 2, paragraph 14). Rhee does not explicitly disclose that the rate control scheme is TFRC.

Li discloses a congestion control mechanism for streaming media comprising the following feature.

Regarding **claim 4**, wherein the rate control scheme is TFRC (see Figure 2B, item 228).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Rhee with the features, as taught by Li, in order to make full use of network resources and actively adjust the sending rate when the network gets congested (see Li col. 1, lines 33-36).

6. Claims 6-10 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rhee (US 2002/0181494 A1) in view of Baillargeon (US 2004/0052212 A1).

Rhee discloses all elements as applied to paragraph 3 above including the following features: regarding **claim 8**, wherein data packets (see "packets," Abstract) are transmitted over the network (see Figure 1, item 104) from a sender (see Figure 1, item 100) to a receiver (see Figure 1, item 102) employing the rate control scheme (see "TEAR," page 1, paragraph 13) with a sending rate (see "transmission rate," Abstract) which can be adapted using feedback information from the receiver (see "send packets to the receiver at the rate calculated by the receiver," Abstract), comprising the steps of: exchanging PDP context between the receiver and the network (see "TCP," Abstract), signaling PDP context to the receiver (see "packets received from a sender," Abstract); and adapting the sending rate using the signaled PDP context information (see "send packets to the receiver at the rate calculated by the receiver," Abstract); regarding **claim 9**, wherein data packets (see "packets," Abstract) are transmitted over the network (see Figure 1, item 104) from a sender (see Figure 1, item 100) to a receiver (see Figure 1, item 102) employing the rate control scheme (see "TEAR," page 1, paragraph 13) with a sending rate (see "transmission rate," Abstract) which can be adapted using feedback information from the receiver (see "send packets to the receiver at the rate calculated by the receiver," Abstract), comprising the steps of: exchanging PDP context between the receiver and the network (see "TCP," Abstract), signaling PDP context to the receiver (see "packets received from a sender," Abstract); and adapting the sending rate using

the signaled PDP context information (see "send packets to the receiver at the rate calculated by the receiver," Abstract).

Rhee does not disclose the following features: regarding **claim 6**, wherein the network comprises a core network element of a UMTS network; regarding **claims 7 and 13**, wherein the core network element is a gateway GPRS support node between the core network and an external packet data network; regarding **claims 8 and 9**, a mobile network; regarding **claim 10**, wherein the receiver is a streaming application receiver located in a mobile terminal of a UMTS network.

Baillargeon discloses packet flow control method for a wireless network comprising the following features.

Regarding **claim 6**, wherein the network comprises a core network element of a UMTS network (see "UMTS," page 2, paragraph 19).

Regarding **claims 7 and 13**, wherein the core network element is a gateway GPRS support node (see "gateway GPRS," page 2, paragraph 19) between the core network (see Figure 1, item 28) and an external packet data network (see Figure 1, item 14).

Regarding **claims 8 and 9**, a mobile network (see Title).

Regarding **claim 10**, wherein the receiver is a streaming application (see "network application" and "delay sensitive," page 2, paragraph 16) receiver located in a mobile terminal (see "mobile subscriber," page 2, paragraph 16) of a UMTS network (see "UMTS," page 2, paragraph 18).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Rhee with the features, as taught by Baillargeon, in order to manage communications in a wireless network under various conditions (see Baillargeon page 1, paragraph 8).

7. Claims 11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rhee (US 2002/0181494 A1) in view of Baillargeon (US 2004/0052212 A1), further in view of Li (7,099,954 B2):

Rhee and Baillargeon disclose all elements as shown in paragraph 6 above including the following: regarding **claims 11 and 14**, wherein the PDP context information (see "PDP context," page 4, paragraph 40) is transmitted from a control plane (see "packet gateway," page 4, paragraph 40) to a user plane of the client (see "mobile station," page 4, paragraph 40).

Rhee and Baillargeon do not disclose the following element: the control scheme is TFRC.

Li discloses a congestion control mechanism for streaming media comprising the following feature.

Regarding **claim 11**, the control scheme is TFRC (see Figure 2B, item 228).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Rhee and Baillargeon with the features, as taught by Li, in order to make full use of network resources and actively adjust the sending rate when the network gets congested (see Li col. 1, lines 33-36).

Conclusion

Examiner's Note: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sameer Aghera whose telephone number is 571-272-9744. The examiner can normally be reached on M-F 7:30 AM to 5 PM; Off every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Yao can be reached on 571-272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SA

Sameer Aghera

KWANG BIN YAO
SUPERVISORY PATENT EXAMINER

A handwritten signature in black ink, appearing to read 'K. B. Yao', written in a cursive style.